

CLAIMS

What is claimed is:

1. A method of manufacturing an electro-active lens comprising:

 providing a lens blank comprising a front and back lens blank surface, a thickness and an index of refraction;

 placing an electro-active element on one of the front or back surface of the lens blank; and

 forming a covering layer over the surface of the lens blank containing the electro-active element.
2. A method as in claim 1, wherein the lens blank is selected from the group consisting of a semi-finished blank, an unfinished lens blank, a lens wafer, a preformed optic and a finished lens blank.
3. A method as in claim 1, further comprising the forming a recess in the front or back surface of the lens blank for receiving the electro-active element which is placed on the lens blank.
4. The method of claim 3 wherein the recess is formed by one of machining or molding the surface of the lens blank.

5. A method as in claim 1, wherein the electro-active element is connected to an electrical bus.
6. A method as in claim 5, wherein the bus is flexible.
7. A method as in claim 5, wherein the bus at least partially encircles the electro-active element.
8. A method as in claim 5, wherein the bus is connected to a transparent electro-active lead that reaches into a periphery of the electro-active lens.
9. A method as in claim 5, wherein the bus comprises a plurality of transparent electrical leads that radiate outward from the electro-active element.
10. A method as in claim 5, wherein the bus contains at least one perforation.
11. A method as in claim 1, wherein the electro-active element is connected to a controller.
12. A method as in claim 1, wherein the electro-active element is connected to a power source.

13. A method as in claim 12 wherein the power source is connected to a hinge of a spectacle frame.
14. A method as in claim 12 wherein the power source is connected to the temple of a spectacle frame.
15. A method as in claim 12 wherein the power source is connected to a hingescrew of a spectacle frame.
16. A method as in claim 12 wherein the power source is contained within the electro-active lens.
17. A method as in claim 1, wherein the covering layer is formed by molding.
18. A method as in claim 1, wherein the covering layer is formed by surface-casting.
19. A method as in claim 1, wherein the covering layer is formed by conformal sealing.
20. A method as in claim 1, wherein the covering layer is formed by a lens wafer.
21. A method as in claim 1, wherein the lens blank is a finished lens blank having an optical power equal to a wearer's distance vision prescription.

22. A method as in claim 1, wherein the lens blank is a finished lens blank having an optical power equal to zero.
23. A method as in claim 1, wherein the electro-active element provides a refractive change.
24. A method as in claim 23, wherein the refractive change corrects for higher order aberrations.
25. A method as in claim 23, wherein the refractive change corrects for unconventional refractive error.
26. A method as in claim 23, wherein the refractive change corrects for conventional refractive error.
27. The method of claim 1 where in the electro-active element is connected to a view detector.
28. A lens manufactured according to the method of claim 1 wherein the lens blank corrects a wearer's conventional and non-conventional refractive error, and wherein the electro-active element corrects the wearer's spherical error.

29. A method of manufacturing an electro-active lens from a lens blank comprising
providing a lens blank comprising a front and back surface, a thickness and an
index of refraction, the front or back lens blank surface having a recess;
placing an electro-active element within the recess of the lens blank surface; and
forming a covering layer over the surface of the lens blank containing the
electro-active element.

30. A method as in claim 31, wherein the covering layer is formed by way of a lens
wafer.

31. A method of manufacturing an electro-active lens comprising:
forming a lens blank having a front surface, a back surface, a thickness and an
index of refraction around an electro-active element and a conductive bus.

32. An electro-active lens having a front curve, a back curve, a thickness, and an index
of refraction comprising:
a base lens;
an electro-active element; and
a conductive bus.